Review of Pension Funding Status
Vermont State Teachers' Retirement System

Office of the Vermont State Treasurer
February 13, 2004

Pension Benefits are essentially IOUs to employees that accumulate while they are working and that are cashed in at the time of retirement. These benefits are also a partnership, since employees make ongoing contributions to the plan with the expectation that the employer will meet its obligations.

Who is responsible for benefit payments?

Public pension funds, unlike private or corporate funds, are not regulated by the Employee Retirement Income Security Act of 1974 (ERISA) and do not have back-up from the Pension Benefit Guaranty Corporation, as private corporations do, to provide a safety net to pay benefits in case of system deficiencies.

Public funds must ultimately turn to individual sponsors, in this case the State of Vermont, to make good on retirement IOUs.

The Bottom Line

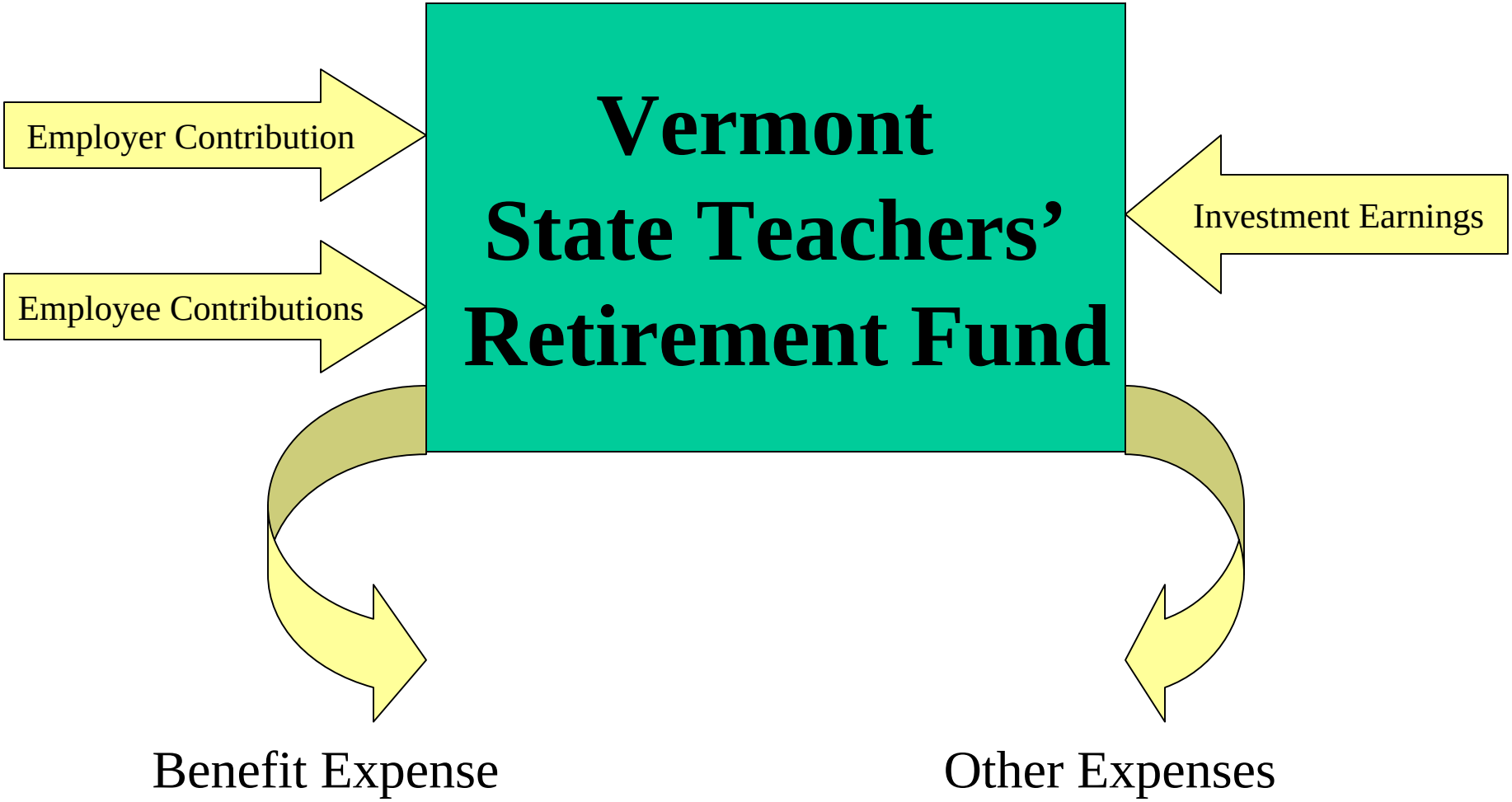
The VSTRS pension fund has been level-funded for three years in a row and the Governor has recommended level funding again in FY 05, despite the fact that the gap between the actuarially required contributions from the State and actual appropriations is growing significantly.

Fiscal Year	Actuary's Recommend	Actual Approp.
FY 2002	$22,146,880	$20,446,282
FY 2003	$28,279,810	$20,446,282
FY 2004*	$41,658,946	$20,446,282
FY 2005**	$43,592,332	$20,446,282

* The significant increase in FY 04 resulted in large part from the required five-year actuarial experience study.

** Governor's recommendation

Pension Funding Model

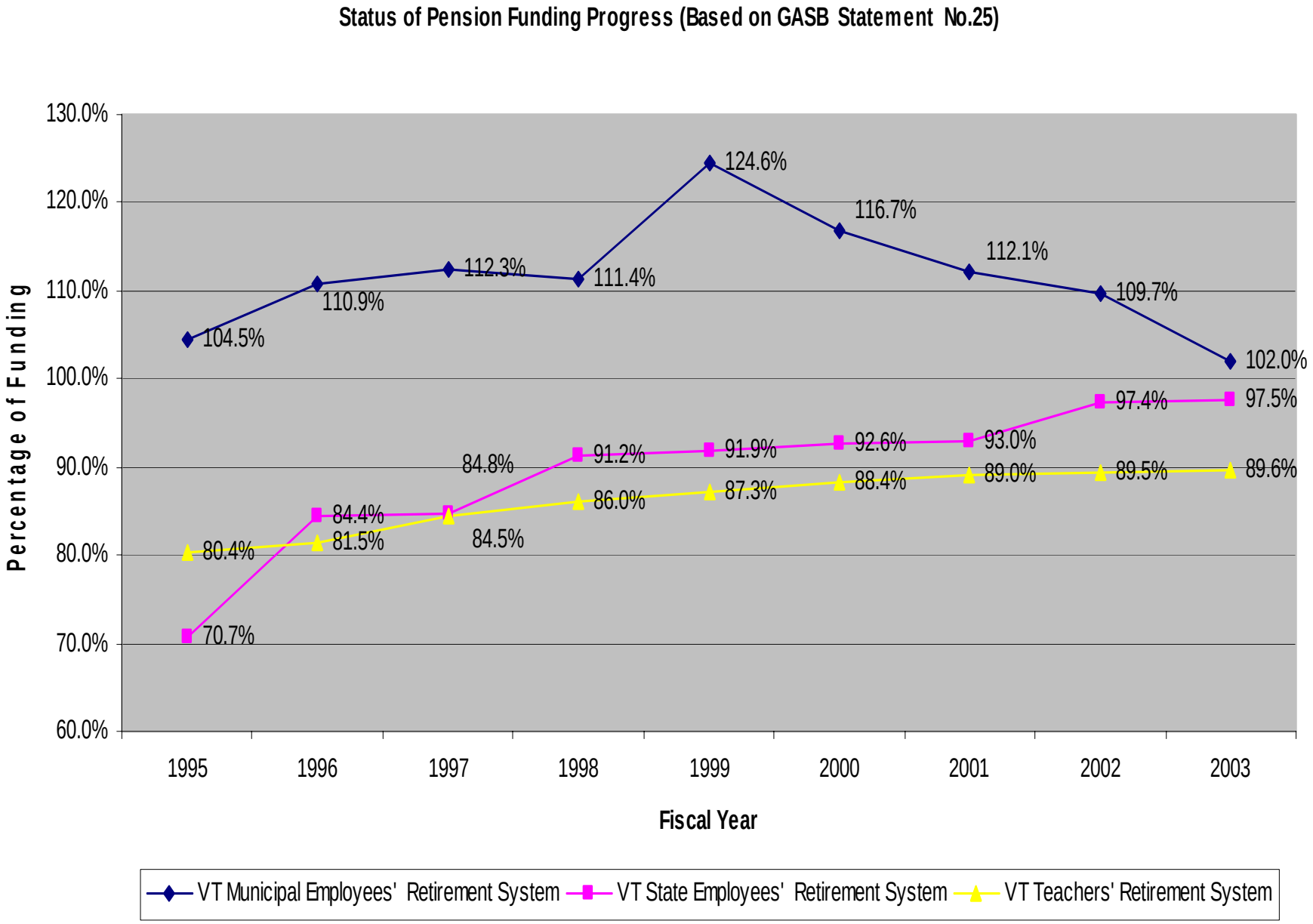


Long-term Actuarial Funding of VSTRS: Funded ratio improves, but unfunded liability continues to rise.

Fiscal Year	Actuarial Value of Assets (AV)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability	% Funded Actuarial value (GASB 25)
2003	$1,218,000,794	$1,358,822,000	$140,821,206	89.6%
2002	$1,169,294,000	$1,307,202,000	$137,908,000	89.5%
2001	$1,116,846,000	$1,254,341,000	$137,495,000	89.0%
2000	$1,037,465,880	$1,174,087,000	$136,621,120	88.4%
1999	$931,056,000	$1,066,400,000	$135,344,000	87.3%
1998	$821,977,000	$955,694,000	$133,717,000	86.0%
1997	$717,396,000	$849,179,000	$131,783,000	84.5%
1996	$570,776,000	$700,377,000	$129,601,000	81.5%
1995	$520,850,000	$648,052,000	$127,202,000	80.4%
1994	$473,229,000	$597,851,000	$124,622,000	79.2%
1993	$433,327,000	$555,220,000	$121,893,000	78.0%
1992	$390,098,000	$509,140,000	$119,042,000	76.6%
1991	$360,301,000	$476,397,000	$116,096,000	75.6%

Pension Operations Summary

Vermont State Teachers' Retirement System			
Category	Fisal Year 2003	Fiscal Year 2002	Fiscal Year 2001
SOURCES OF FUNDS			
Employee Contributions	$18,820,703	$18,075,514	$16,350,020
Employer Contributions	$20,446,282	$20,446,282	$19,143,827
Other Income	$438,166	$121,238	$296,005
Investment Income	$52,506,838	-$56,937,537	-$38,810,722
APPLICATION OF FUNDS			
Retirement Benefits	$50,409,313	$46,624,879	$42,526,838
Refunds	$1,109,174	$867,715	$1,089,403
Health/Life Insurance Expenses	$6,634,738	$5,299,600	$4,194,215
Administrative Expenses	$763,527	$663,545	$677,493
Other Expenses	$702,568	$280,609	$441,354
Addition to Net Assets Held in Trust for Pension Benefits	$32,592,669	-$72,030,851	-$51,950,173

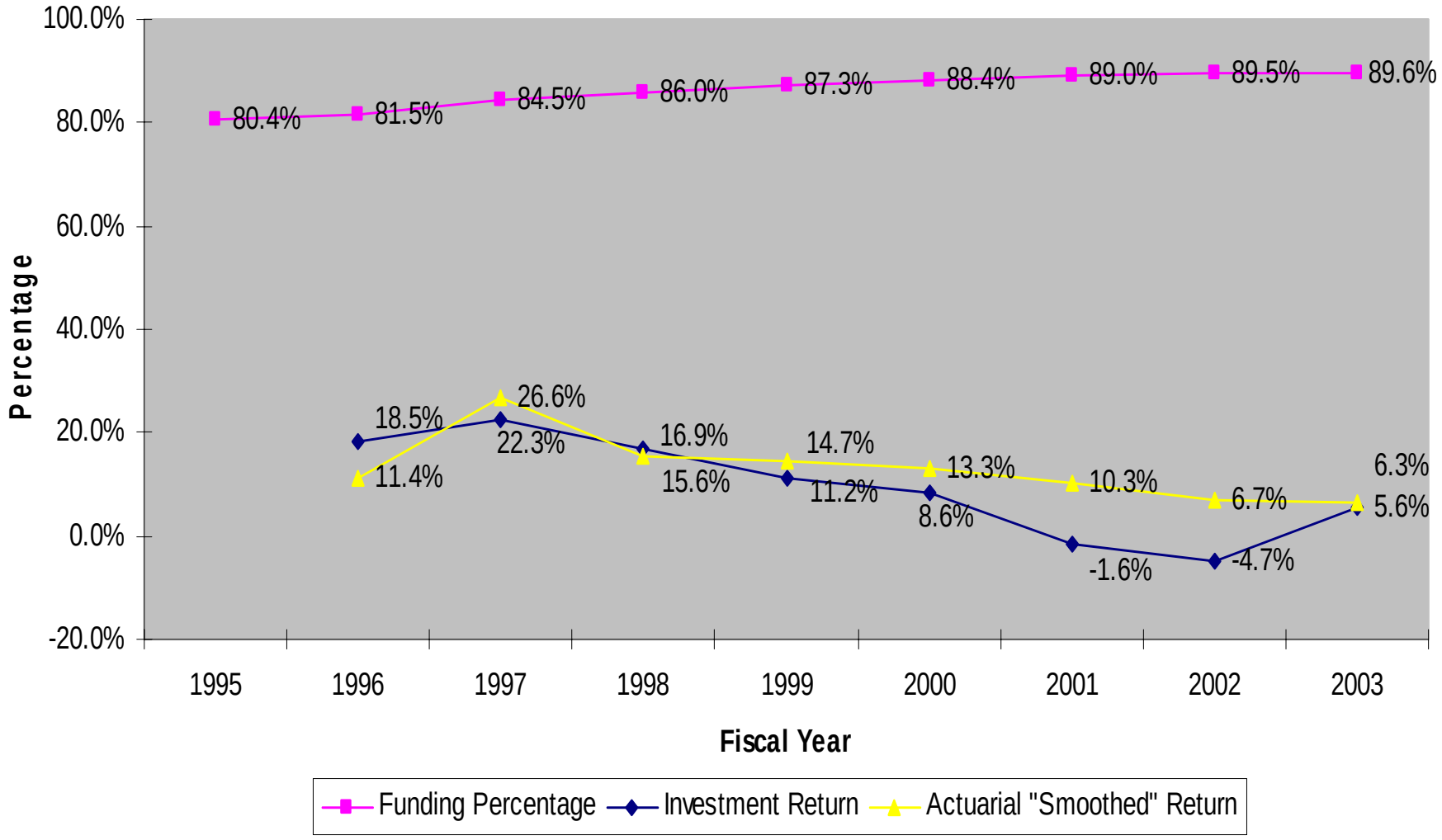

Status of Pension Funding Progress (Based on GASB Statement No.25)
Percentage of Funding
130.0%
120.0%
110.0%
100.0%
90.0%
80.0%
70.0%
60.0%
1995
1996
1997
1998
1999
2000
2001
2002
2003
Fiscal Year
104.5%
110.9%
112.3%
111.4%
124.6%
116.7%
112.1%
109.7%
102.0%
70.7%
84.4%
84.8%
91.2%
91.9%
92.6%
93.0%
97.4%
97.5%
80.4%
81.5%
84.5%
86.0%
87.3%
88.4%
89.0%
89.5%
89.6%
VT Municipal Employees' Retirement System
VT State Employees' Retirement System
VT Teachers' Retirement System

Long-term Investment Performance Of Vermont's Three State-Supported Retirement Systems

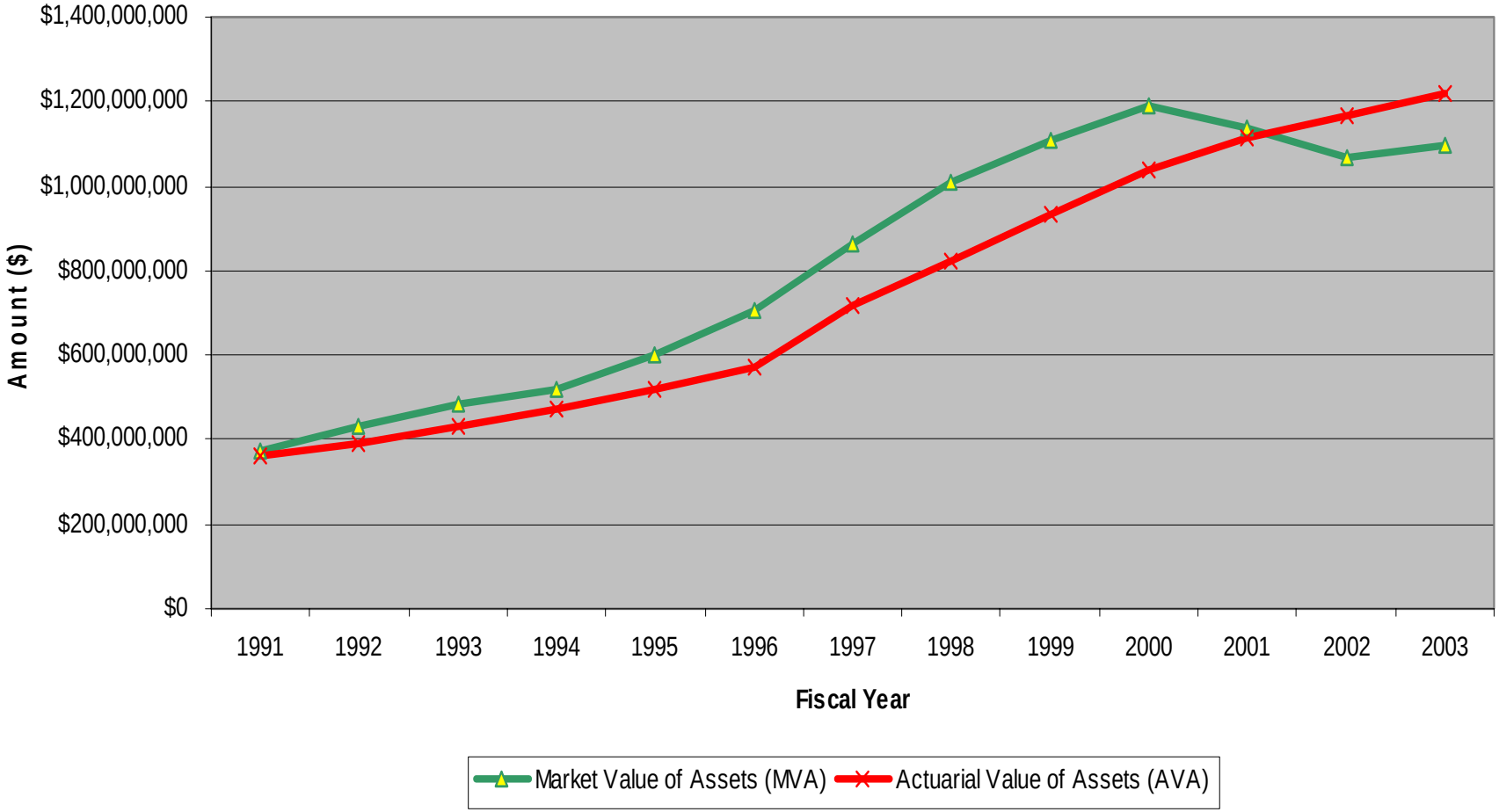
As of December 31, 2003

Retirement System:	Last 1 Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years
Teachers Composite (Gross)	23.8%	3.2%	5.1%	8.5%	10.1%
Employees Composite (Gross)	23.4%	2.2%	4.0%	7.8%	9.4%
Municipal Composite (Gross)	20.8%	3.4%	4.7%	9.0%	10.3%
Median Public Fund	22.1%	2.8%	4.5%	7.7%	8.9%

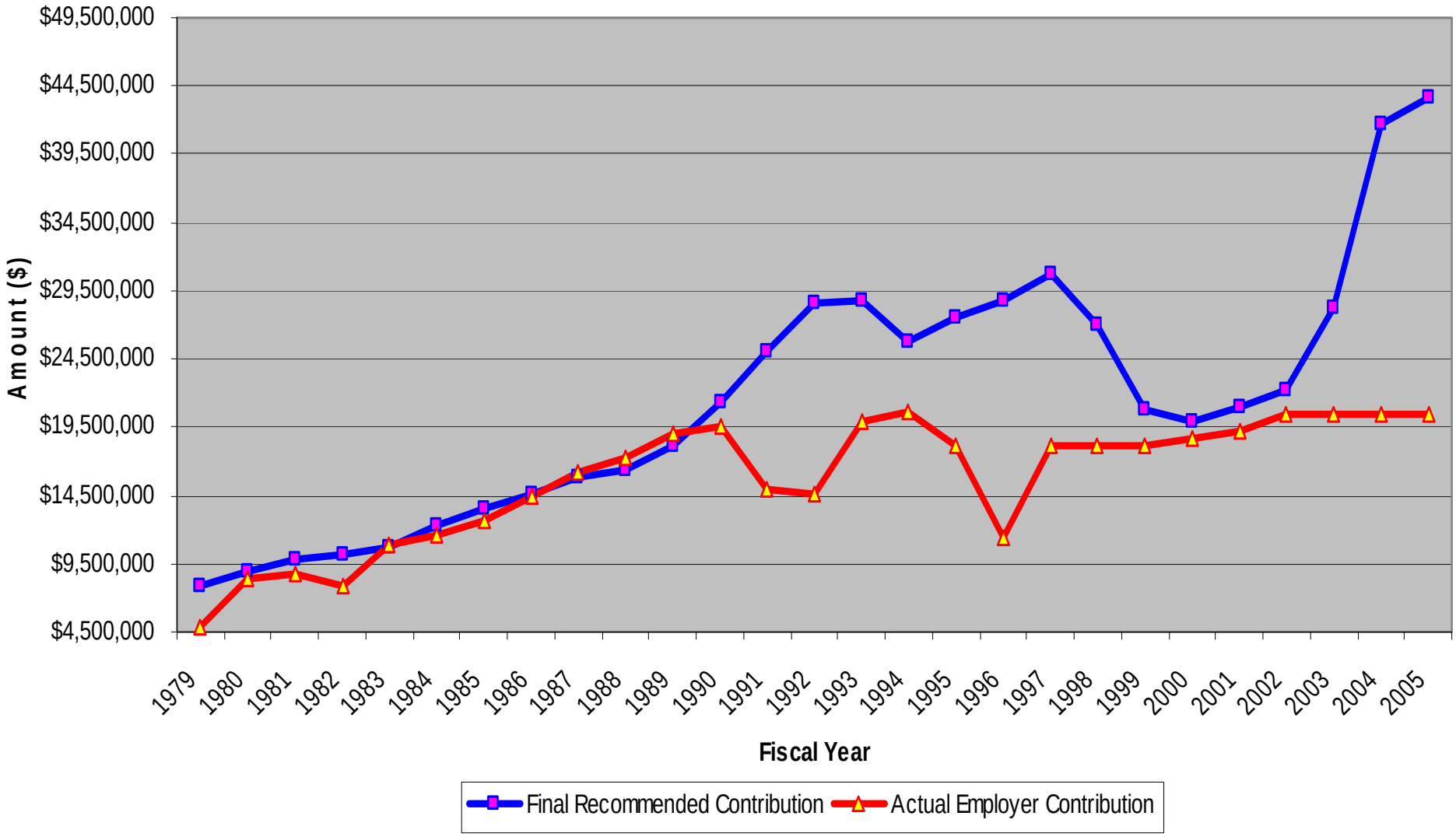
Actuarial smoothing may be propping up funded ratio



Vermont State Teachers' Retirement Fund
Actuarial vs. Market Value of Assets



VSTRS Final Actuarial Recommended Contribution vs. Actual Employer Contribution



Note: Final recommended contribution is developed in October of the same fiscal year. FY 04 and 05 are projected based on actuarial valuation.

FY 05 actual is Governor's recommendation.

VSTRS Liability Looking Forward

Fiscal Year	Projected Payroll	Normal Rate	CONTRIBUTIONS		
			Normal	Accrued Liability	Total
2004	$437,914,000	6.83 %	$29,863,392	$11,795,554	$41,658,946
2005	456,914,000	6.83%	31,207,000	12,385,332	43,592,332
2006	477,475,000	6.83%	32,612,000	13,004,599	45,616,599

On the basis of the June 30,2003 actuarial valuation

How VSTRS Compares to Other Public Funds: 2003 Wilshire Report

•Assets of large state pension funds fell 6% in 2002, while liabilities grew 10%, according to a 2003 survey by Wilshire Associates Inc.

• Of the 123 state funds in the survey, 79% are underfunded, according to Wilshire, up from 51% in 2001 and 31% in 2000.

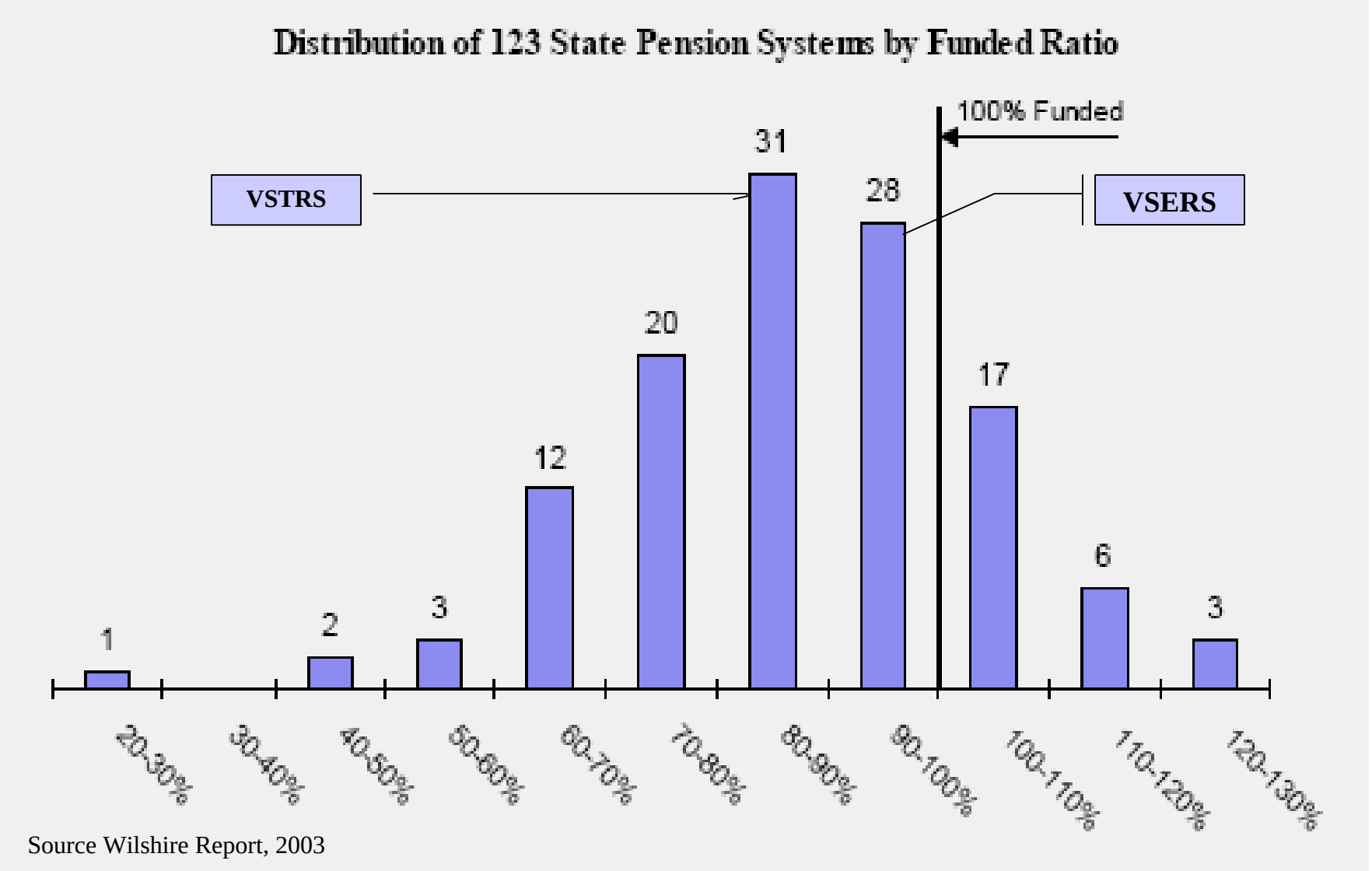
•Wilshire forecasts a long-term return on state pension assets of about 7.5% per annum, slightly below the VSTRS average **actuarial** interest rate assumption of 8%.

•Vermont's actuarial assumption was reduced from 8.5% to 8%, but still is higher than the Wilshire estimate.

Source: Wilshire Associates, 2003

Keep in mind that the reporting of data on public retirement systems lacks uniform timeliness and disclosure.

Vermont Retirement Systems: Where do We Stand in Comparison to Other States?



Source Wilshire Report, 2003

State Comparative Data

Assets minus liabilities (millions) and rank out of 123 systems:

Best		Worst	
1 Wisconsin RS	$13,586	123 Illinois STRS	-$20,681
2 New York STRS	$11,847	122 Ohio PERS	-$18,334
3 California PERS	$7,345	121 Texas STRS	-$17,627
4 North Carolina	$7,024	120 Oregon PERS	-$10,753
5 California UC	$4,951	119 Indiana STRS	-$7,537

41 Vermont VSERS -128
51 Vermont VSTRS -241

Source: Wilshire Associates, 2003

State Comparative Data

Ratio of assets (market value) to liabilities and rank out of 123 systems:

Best		Worst	
1 Texas LECOSRF	129%	123 W. Virginia STRS	21%
2 Georgia PERS	127	122 Indiana STRS	43
3 Wisconsin RS	126	121 Oklahoma STRS	44
4 North Carolina PERS	118	120 Illinois STRS	52
5 New York STRS	117	120 Illinois PERS	52

58 Vermont VSERS 89%
82 Vermont VSTRS 82%

Source: Wilshire Associates, 2003

State Comparative Data

Combined State pension unfunded liabilities as a % of State Budget Expenditures

Best		Worst	
1 Wisconsin	-121%	50 Nevada	267%
2 North Carolina	-56%	49 Oregon	230%
3 Georgia	-36%	48 Oklahoma	193%
4 Arizona	-28%	47 Mississippi	176%
5 Florida	-15%	46 West Virginia	163%
6 New York	-11%	45 Illinois	144%
7 California	-07%	44 Louisiana	142%
8 Pennsylvania	-06%	43 Montana	124%
9 South Dakota	-06%	42 Ohio	102%
10 Virginia	02%	41 Rhode Island	96%

18 Vermont 42%

Source: Wilshire Associates, 2003

Impacts of Underfunding

- Continued underfunding will further increase the unfunded liability and the tax burden for future generations of taxpayers.

- Taxpayers in Vermont are already bearing the burden of past underfunding. For example, if additional funding was not required to make up for prior shortfalls, the recommended contribution for FY 2004 would have been $14 million less than it was.

- Lost investment earnings will also need to be repaid. The approximate cumulative effect of lost earnings since 1979 is $120 million.

- If there were no shortfall in contributions, the funded ratio would be 99.2% instead of 89.6% as of June 30, 2003.

Potential Impacts of Underfunding on Vermont's Credit Rating

"Pension funding is an important element of credit analysis because pension expense has a direct effect on current budgets and a long-term impact on overall financial flexibility. Contractually obligated pension expenditures, along with debt service commitments, are amongst a governmental entity's fixed-cost burden, pulling resources from other essential programs.... Fitch Ratings expects few, if any, downgrades to occur solely as a result of rising pension costs. However, increasing pension expenses can contribute to or exacerbate declines in liquidity and financial flexibility that may lead to downgrades in the absence of corrective action."

-Fitch Rating Service: September 18, 2003

Example of “lost interest” from one year of underfunding

"Lost interest" on 1982 Contribution

Year	Principal Not Contributed	Investment Return	Interest "Lost"	Accumulated Interest
1982	$2,377,449	20.60%	489,754	489,754
1983	$2,867,203	20.70%	593,511	1,083,265
1984	$3,460,714	9.90%	342,611	1,425,876
1985	$3,803,325	24.00%	912,798	2,338,674
1986	$4,716,123	21.10%	995,102	3,333,776
1987	$5,711,225	18.70%	1,067,999	4,401,775
1988	$6,779,224	16.30%	1,105,014	5,506,789
1989	$7,884,238	18.90%	1,490,121	6,996,910
1990	$9,374,359	-1.00%	(93,744)	6,903,166
1991	$9,280,615	18.60%	1,726,194	8,629,360
1992	$11,006,809	10.80%	1,188,735	9,818,095
1993	$12,195,544	12.10%	1,475,661	11,293,756
1994	$13,671,205	4.90%	669,889	11,963,645
1995	$14,341,094	16.20%	2,323,257	14,286,902
1996	$16,664,351	18.50%	3,082,905	17,369,807
1997	$19,747,256	22.30%	4,403,638	21,773,445
1998	$24,150,894	16.90%	4,081,501	25,854,946
1999	$28,232,395	11.20%	3,162,028	29,016,974
2000	$31,394,423	8.60%	2,699,920	31,716,894
2001	$34,094,343	-1.60%	(545,509)	31,171,385
2002	$33,548,834	-4.70%	(1,576,795)	29,594,590
2003	$31,972,039	5.60%	1,790,434	31,385,024

Note: Interest rates through 1992 were calendar, rather than fiscal, and 1987 is estimated.

Funding Options:

- Rely on investment returns to buoy system
  - *Without increases in contributions, investment returns will simply not be sufficient to cover liabilities.*
- Revise funding schedule to increase amortization timeline
  - *Analogous to extending your mortgage.*
  - *Short-term budget solution, but increases costs significantly in long run.*
  - *May raise eyebrows at rating agencies.*

Funding Options:

- Pension Obligation Bonds -- Borrow to raise funds to close funding gap at interest rates lower than anticipated investment returns
  - *Competes with other bonding needs; adds to State debt.*
  - *While returns may be higher than debt payments, the reverse can happen as well. Some retirement funds employing this strategy did not make enough to pay debt service over last few years.*
  - *Would definitely raise eyebrows at rating agencies.*
- Increase Employee Contribution
  - *Not a fair solution, as teacher contributions have not faltered over the years.*
  - *Shifts burden and alters the promised IOU.*

Funding Options:

- **Increase Employer Contribution**

  - Requires legislative commitment to increase funding over time to match actuarially required contributions.

- **Use a significant portion of surplus or "waterfall" funds to address unfunded liability**

  - May be more advantageous to pay the pension "debt" or IOU, instead of internal fund deficits, although long-term plan should accommodate both to improve fiscal health of Vermont.

  !!! Internal fund deficits do result in reductions to available operating cash and need to be replenished. However, the interest rate the State obtains for investment of operating cash is considerably lower than rate of return for pension funds. Redirecting surplus "waterfall" funds to reserves as opposed to funding VSTRS is like paying off your lower rate credit card before your higher rate credit cards… not a cost-effective decision.